

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12 (Cancelled).

Claim 13 (Currently amended): A method of grain moisture sensing and measurement comprising:
selecting a frequency from a plurality of frequencies;
applying the frequency to a parallel plate cell filled with grain;
measuring a first complex admittance of the parallel plate cell filled with grain;
applying the frequency to a reference;
measuring a second complex admittance of the reference; and
computing a complex permittivity from the first complex admittance and the second complex admittance.

Claim 14 (Original): The method of claim 13 wherein the step of computing includes applying a calibration factor to the reference admittance to calculate an empty cell admittance.

Claim 15 (Original): The method of claim 13 further comprising selecting the second reference admittance from a plurality of reference admittances.

Claim 16 (Withdrawn): A method of measuring moisture of grain comprising:

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measuring real and imaginary components of an excitation voltage having a frequency applied to a driven plate of a parallel plate cell;

measuring real and imaginary components of a sense current sensed at a sense plate of the parallel plate cell;
calculating a complex admittance of the parallel plate cell;
calculating a complex admittance of a reference admittance; and
calculating a grain complex permittivity.

Claim 17 (Withdrawn): The method of claim 16 further comprising using a plurality of references to determine one or more distortion characteristics of measuring the real and imaginary components.

Claim 18 (Withdrawn): The method of claim 17 further comprising correcting for the determined distortion characteristics.

Claim 19 (Withdrawn): The method of claim 16 wherein the reference admittance is selected from a set comprising the parallel plate cell when empty, a capacitive load, and a complex impedance load.

Claim 20 (Withdrawn): The method of claim 16 further comprising changing the frequency of the excitation voltage.

Claim 21 (Withdrawn): The method of claim 16 further comprising selecting the reference admittance.

Claims 22-26 (Cancelled).

Claim 27 (New): A method of claim 13 further comprising:
measuring real and imaginary components of an excitation voltage
having a frequency applied to a driven plate of a parallel
plate cell;
measuring real and imaginary components of a sense current
sensed at a sense plate of the parallel plate cell;
calculating the first complex admittance of the parallel plate
cell;
calculating the second complex admittance of a reference
admittance; and
calculating a grain complex permittivity.

Claim 28 (New): The method of claim 16 further comprising using
a plurality of references to determine one or more distortion
characteristics of measuring the real and imaginary components.

Claim 29 (New): The method of claim 17 further comprising
correcting for the determined distortion characteristics.

Claim 30 (New): The method of claim 16 wherein the reference
admittance is selected from a set comprising the parallel plate
cell when empty, a capacitive load, and a complex impedance
load.

Claim 31 (New): The method of claim 16 further comprising
changing the frequency of the excitation voltage.

Claim 32 (New): The method of claim 16 further comprising
selecting the reference admittance.